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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,483	09/13/2000	Abraham R. Matthews	FORT-000600	2761

64128 7590 10/18/2007

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2155	
MAIL DATE	**DELIVERY MODE**
10/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/663,483	MATTHEWS ET AL.	
	Examiner	Art Unit	
	Benjamin R. Bruckart	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-8 and 21-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-8 and 21-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 November 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :20070731, 20070929 and 20070927.

Detailed Action

Status of Claims:

Claims 1-2, 4-8, 21-34 are pending in this Office Action.

Claims 3, 9-20 are cancelled.

Claims 21-34 are new.

The new formal drawings filed 11/6/2006 are accepted.

The changes to the specification made 11/6/2006 are accepted.

The 35 U.S.C. 112, second paragraph rejection is withdrawn in light of applicant's amendment.

Information Disclosure Statement

The information disclosure statements filed on 7/31/06, and two filed on 9/29/07 have been considered.

Response to Arguments

Applicant's amendment filed 3/13/06 has been fully considered but is moot in view of new grounds of rejection on the new claims and found not persuasive on the previously presented claims. The reasons are set forth below.

Applicant's invention as claimed:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-9; 25-29, 34 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No 6,674,756 by Rao et al.

Regarding claim 1, a method, comprising:

providing a switch having a plurality of process elements (PEs) [Rao: col. 2, lines 15-27; col. 4, lines 1-5], each of the plurality of Pes running a network operating system (NOS) [Rao: col. 4, lines 1-5; col. 8, lines 38- col. 9, line 43], the NOS allowing the switch to create discrete customized services for customers of a service provider operating the switch by providing each customer with a customized configuration of service object groups (Rao: col. 8, lines 38- col. 9, line 43);

creating a system virtual router on a first PE of the plurality of PEs (Rao: col. 19, lines 16-43), wherein creating the system virtual router includes establishing a global object manager associated with the NOS of the first PE, the globel object manager being responsible for managing global object groups and global object configurations (Rao: col. 19, lines 39-43); and

configuring the plurality of PEs from the system virtual router (Rao: col. 19, lines 44-46; col. 17, lines 25- col. 18, line 11), wherein configuring includes establishing, via the global object manager, a local object manager on each of the PEs, wherein the local object manager for a given PE of the plurality of PEs manages objects local to the given PE and transfers messages between objects on the given PE and between objects on the given PE and objects on other PEs of the plurality of PEs (Rao: col. 8, lines 38-55).

With regards to claim 2, an article comprising a computer readable medium having instructions thereon, wherein the instructions, when executed in a computer, create a system for executing the method of claim 1 (Rao: col. 5, lines 64- col. 6, line 6).

Regarding claim 4, the method of claim 1, wherein said configuring PEs of the plurality of PEs includes creating a customer virtual router form selected PEs on multiple blades (Rao: col. 3, lines 67- col. 4, line 9; blades; col. 20, lines 32-41), wherein creating a customer virtual router includes (Rao: col. 19, lines 28-52):

establishing a virtual private network (VPN) associated with a customer (Rao: col. 20, lines 22-41);

adding the customer virtual router to a list of virtual routers associated with the VPN (Rao: col. 20, lines 11-15; partitions of the VR to the VPN); and

creating an object associated with the customer virtual router on each of the selected PEs (Rao: col. 19, lines 47-67).

Regarding claim 5, the method of claim 1, wherein said configuring the plurality of PEs includes:

adding new PEs (Rao: col. 7, lines 14-26); and

using a distributed management layer to group PEs into at least one virtual router (Rao: col. 18, lines 12-64), wherein grouping includes assigning a group identifier to selected objects in each PE such that the selected objects can be addressed as a group (Rao: col. 19, lines 53-67).

Regarding claim 6, the method of claim 5, wherein using a distributed management layer to group PEs into at least one virtual router includes:

requesting the global object manager to create a virtual router from a group of PEs (Rao: col. 19, lines 28-52);

requesting one or more of the local object managers to group the group of PEs (Rao: col. 8, lines 38-55);

activating PEs of the group (Rao: col. 18, lines 43-55); and

generating a status message that the at least one virtual router is created (Rao: col. 19, lines 22-26, 62-65; col. 24, lines 43-51).

Regarding claim 7, the method of claim 6, wherein said activating PEs of the group includes causing a state machine for a PE of the PEs of the group to enter an activate state (Rao: col. 19, lines 28-61; col. 24, lines 26-37).

Regarding claim 8, the method of claim 5, wherein using distributed management layer to group PEs includes adding object identifiers to a global object database (Rao: col. 19, lines 62-67; resource pool; col. 18, lines 12-24).

Regarding claim 25, a method comprising:

providing a switch having a plurality of processor elements (PEs) (Rao: col. 2, lines 15-27; col. 4, lines 1-5), each of the plurality of PEs running a network operating system (NOS) (Rao: col. 4, lines 1-5; col. 8, lines 38- col. 9, line 43);

creating discrete customized services for each customer of a service provider operating the switch by providing each customer with a customized configuration of service object groups (Rao: col. 8, lines 38- col. 9, line 43); and

configuring and managing the service object groups by

establishing a global object manager associated with the NOS of a first PE of the plurality of PEs, the global object manager being responsible for managing a global object database, global object groups and global object configurations (Rao: col. 17, lines 25- col. 18, lines 28);

establishing, via the global object manager, a local object manager on each of the plurality of PEs (Rao: col. 17, lines 25- col. 18, lines 28; col. 8, lines 38-55); and

each of the local object managers managing objects local to the corresponding PE of the plurality of PEs, including establishing object channels between objects residing in local and remote address spaces via connection end points supported by the NOS, each object channel representing a point-to-point asynchronous communications channel

between a first object and a second object onto which services can be pushed (Rao: col. 8, lines 38-55).

Regarding claim 26, the method of claim 25, further comprising configuring the plurality of PEs by creating a customer virtual router from selected PEs of the plurality of PEs on multiple blades of the switch (Rao: col. 3, lines 67- col. 4, line 9; blades; col. 20, lines 32-41);

establishing a virtual private network (VPN) associated with a customer (Rao: col. 20, lines 22-41);

adding the customer virtual router to a list of virtual routers associated with the VPN (Rao: col. 20, lines 11-15; partitions of the VR to the VPN); and

creating an object associated with the customer virtual router on each of the selected PEs (Rao: col. 19, lines 47-67).

Regarding claim 27, the method of claim 26, wherein said configuring the plurality of PEs includes:

adding new PEs (Rao: col. 7, lines 14-26); and

using a distributed messaging layer of the NOS to group PEs into at least one virtual router (Rao: col. 18, lines 12-64), wherein grouping includes allowing selected objects in each PE to be addressed as a group by assigning a group identifier to the selected objects (Rao: col. 19, lines 53-67).

Regarding claim 28, the method of claim 27, wherein said using a distributed messaging layer of the NOS to group PEs into at least one virtual router includes:

requesting the global object manager to create a virtual router from a group of PEs (Rao: col. 19, lines 28-52);

requesting one or more of the local object managers to group the group of PEs (Rao: col. 8, lines 38-55);

activating PEs of the group (Rao: col. 18, lines 43-55); and

generating a status message that the at least one virtual router is created (Rao: col. 19, lines 22-26, 62-65; col. 24, lines 43-51).

Regarding claim 29, the method of claim 27, wherein said using a distributed messaging layer of the NOS to group PEs includes adding object identifiers to the global object database (Rao: col. 19, lines 62-67; resource pool; col. 18, lines 12-24).

Regarding claim 34, an article of manufacture comprising a computer-readable medium having instructions stored thereon, which when executed by one or more processors, cause the method of claim 26 to be performed (Rao: col. 5, lines 64- col. 6, line 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 21-24, 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No 6,674,756 by Rao et al in further view of U.S. Patent No. 7,096,495 by Warrier et al.

Regarding claim 21, the Rao reference teaches the method of claim 1. The Rao reference fails to teach firewalls.

However, the Warrier reference teaches customized configuration of service object groups associated with a first customer represent network resources of the switch sufficient to provide the first customer with network-based managed firewall services (Warrier: col. 3, lines 45- col. 4, line 27) in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the method of Rao to include configuring services to allow firewall services as taught

by Warrier in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

Regarding claim 22, the method of claim 21, wherein the customized configuration of service object groups associated with the first customer further represent network resources of the switch sufficient to provide the first customer with virtual private network (VPN) services (Rao: col. 9, lines 60-col. 10, line 5).

Regarding claim 23, the Rao reference teaches the the method of claim 21. The Rao reference fails to teach firewalls.

However, the Warrier reference teaches customized configuration of service object groups associated with a second customer represent network resources of the switch sufficient to provide the second customer with network-based managed firewall services (Warrier: col. 3, lines 45- col. 4, line 27) in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the method of Rao to include configuring services to allow firewall services as taught by Warrier in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

Regarding claim 24, the method of claim 23, wherein the customized configuration of service object groups associated with the second customer further represent network resources of the switch sufficient to provide the second customer with virtual private network (VPN) services (Rao: col. 9, lines 60-col. 10, line 5).

Regarding claim 30, the Rao reference teaches the method of claim 26. The Rao reference fails to teach firewalls.

However, the Warrier reference teaches customized configuration of service object groups associated with a first customer represent network resources of the switch sufficient to

provide the first customer with network-based managed firewall services (Warrier: col. 3, lines 45- col. 4, line 27) in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the method of Rao to include configuring services to allow firewall services as taught by Warrier in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

Regarding claim 31, the method of claim 26, wherein the customized configuration of service object groups associated with the first customer further represent network resources of the switch sufficient to provide the first customer with virtual private network (VPN) services (Rao: col. 9, lines 60-col. 10, line).

Regarding claim 32, the Rao reference teaches the method of claim 30. The Rao reference fails to teach firewalls.

However, the Warrier reference teaches customized configuration of service object groups associated with a second customer represent network resources of the switch sufficient to provide the second customer with network-based managed firewall services (Warrier: col. 3, lines 45- col. 4, line 27) in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the method of Rao to include configuring services to allow firewall services as taught by Warrier in order to allow administrators to dynamically configure network services (Warrier: col. 1, lines 7-36).

Regarding claim 33, the method of claim 31, wherein the customized configuration of service object groups associated with the second customer further represent network resources of the switch sufficient to provide the second customer with virtual private network (VPN) services (Rao: col. 9, lines 60-col. 10, line).

REMARKS

Applicant's amendment filed 11/6/2006 is entered and considered with 3 IDS statements. Applicant made amendments to the independent claim but mostly added acronyms associated with the previously presented limitations and added new claims.

The Applicant Argues:

The Rao reference does not teach NOS on Processing Elements.

In response, the examiner respectfully submits:

The examiner maintains the rejection. The Rao reference still teaches the claimed invention. Applicant's claimed processing elements (PE) are broad and not designated to any particular structure or specific structure. They are defined by implementation and use and Rao teaches processing elements on the switch. From FM to PM to chassis managers, all processing elements are described in detail. Installing a NOS (network operating system) on a first processing element is interpreted to be the installing of the software installed on the Forwarding Module (col. 4, lines 1-5). Rao teaches forwarding modules (PEs) that operate and perform the operations of allowing the switch to create discrete customized services for customers of a service provider operating the switch by providing each customer with a customized configuration of service object groups (Rao: col. 8, lines 38- col. 9, line 43) where network configurations and processing is conducted. Rao: col. 9, lines 60- col. 10, line 31 teaches users and corresponding network configurations storing preferences and configuration of the network elements (PEs). Further Rao teaches a system virtual router on a first PE of the plurality of PEs (Rao: col. 19, lines 16-43), wherein creating the system virtual router includes establishing a global object manager associated with the NOS of the first PE, the globel object manager being responsible for managing global object groups and global object configurations (Rao: col. 19, lines 39-43) and configuring the plurality of PEs from the system virtual router (Rao: col. 19, lines 44-46; col. 17, lines 25- col. 18, line 11), wherein configuring includes establishing, via the global object manager, a local object manager on each of the PEs, wherein the local object manager for a given PE of the plurality of PEs manages objects local to the given PE and transfers messages between objects on the given PE and between objects on the given PE and objects on other PEs of the plurality of PEs (Rao: col. 8, lines 38-55). The local objects are the

resources locally and globally shared. Applicant in the remarks states limitations of same and different address spaces. However, those limitations do not appear in the claim language nor are they persuasive over the art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 9:00-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin R Bruckart
Examiner
Art Unit 2155

brb BRB

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER